

METHOD AND SYSTEM FOR RESEQUENCING DATA PACKETS
SWITCHED THROUGH A PARALLEL PACKET SWITCH

ABSTRACT

A method to resequence packets includes sequentially
5 allocating in each source ingress adapter a packet rank to each
packet received within each source ingress adapter. In each
destination egress adapter, each ranked data packet is stored
at a respective buffer address of an egress buffer. The
respective buffer addresses of data packets received by a same
10 source ingress adapter with a same priority level and switched
through a same switching plane are linked in a same
linked-list. The respective buffer addresses are preferably
linked by their order of use in the egress buffer, and thus
each linked-list is having a head list pointing to the oldest
15 buffer address. The linked-lists are sorted into subsets
including those linked-lists linking the respective buffer
addresses of data packets received by a same source ingress
adapter with a same priority level. For each subset of
linked-lists, the packet ranks of the data packets stored at
20 the buffer address pointed by the head lists of each
linked-list of each subset are compared to determine the next
data packet to be put in a sequence.